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GROWING LESPEDEZA FOR HAY AND PASTURE

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National Farm and Home Hour

A radio talk by H. N. Vinall, senior agronomist, Bureau of Plant Industry, broadcast Wednesday, December 13, 1933, in the Department of Agriculture period, National Farm and Home Hour, by a network of 48 associate NBC radio stations.

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SALISBURY (Introducing Vinall):

As the winter season comes on and farm people begin figuring out their plans for next year -- a year that will see more changes in the cropping system of American farms than any other ever known -- they are asking lots of questions about lespedeza.

Last month, Dr. E. A. Hollowell of the forage crops section in the Department of Agriculture, gave the answers to some of those queries. This month, H. N. Vinall, senior agronomist in the forage crops work, will answer more of them. Dr. Hollowell gave you facts about the value of lespedeza for soil improvement. Mr. Vinall will give data on the value of lespedeza for hay and pasture and how to grow it for those purposes. Mr. Vinall:

VINALL:

Good afternoon, Farm and Home Hour listeners.

Before I begin this brief discussion, I want to tell you that the leaflet on the uses, varieties, and methods of growing of lespedeza is now off the press. It is Leaflet 100-L, and its title is simply, "Lespedeza". It gives the results of experiments by the Department of Agriculture and State experiment stations and the experience of farmers with lespedeza.

Farmers and scientists agree that the annual lespedezas are especially good grazing plants. The reports on lespedeza as a hay plant recommend it for soils that are too acid to grow alfalfa or clover.

The men who have tried lespedeza as pasture say that it is relished by all kinds of farm animals, is not known to cause bloat, and is nearly as nutritious as alfalfa and the clovers. It is a heavy producer of seed, one of the essentials of an annual pasture plant. It gives much grazing in midsummer and early fall at a time when other pasture plants, like bluegrass and the clovers are least productive.

On this point, let us tell you of the results of an experiment we have conducted with dairy pastures at the Beltsville experiment station of the Department. Five years ago, in the fall of 1928 and the spring of 1929, we seeded experimental pastures with a mixture of grasses and legumes. Among the legumes were Common and Korean lespedeza. One pasture was fertilized. The other was not. This year the fertilized pasture consisted mostly of grasses with only a small percentage of clover and other legumes; the unfertilized pasture had developed a very thick stand of lespedeza.

Now here is the point to note. During April and May this year, the fertilized pasture (with only a small proportion of legumes in it), yielded two and a half times as much as the unfertilized pasture (which had the thick stand of lespedeza). But about June 1st, the lespedeza began to contribute to the

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grazing in the unfertilized pasture. And, from June to October, that pasture outyielded the fertilized pasture by 50 percent.

You see, the lespedeza was most productive in midsummer and early fall, when the grasses were least productive. Grasses behave that way in Tennessee, Kentucky, Missouri, eastern Kansas, southern Illinois, Indiana, Ohio, and West Virginia, and in the western portions of Virginia and North Carolina. Farmers in this territory find that lespedeza in pasture mixtures, or grown in a separate field, equalizes the production of pasture, and reduces the period of expensive barn feeding.

The function of lespedeza further South is not the same. There, the main pasture grasses produce well in midsummer, and the reason for mixing lespedeza with these grasses is to increase the protein and mineral content of the pasture.

Lespedeza is especially productive on cultivated fields following small grains. This is the way to get the most pasture out of it with no expense above that required by the small grain crop. I could take all the rest of my time and an hour besides giving you examples of this fact. I think one will be sufficient. In northwestern Missouri a 10-acre field of winter wheat sown in the fall of 1929 was seeded in the spring of 1930 to Korean lespedeza. Without cultivation or reseeding it came back to a good stand in 1931. No wheat had been sown the fall of 1930 because the capacity of lespedeza was yet unrealized.

Here we are in 1931 with 10 acres of lespedeza. Now listen to what this 10 acres produced. In June 430 ewes and 270 lambs grazed on it for 10 days. Then from July 16 to September 2 twelve heifers grazed the field and gained an average of 1.2 pounds per day. And seed, why, after all this grazing, they harvested 4,000 pounds of seed. This experience made those Missourians greedy. In the fall of 1931 they disked the lespedeza and seeded it into winter wheat. About June 20 in 1932 they took from the field 18 bushels per acre of wheat. Then on July 14 the heifers were turned in to graze. Not 12, but an average of 37 heifers grazed on this 10 acres of lespedeza for six weeks and gained .9 pound per day. To cap the climax the field was disked and seeded to winter wheat that fall and 41 bushels of wheat per acre harvested in June 1933. No reseeding of the lespedeza remember since 1930.

Lespedeza is also valuable in pasture mixtures in the eastern part of the United States from the southern boundary of Pennsylvania south to the Gulf. In this region, lespedeza seeded on old, worn-out fields and grazed rather lightly will control erosion, and in a few years generally improve the soil to a point where it will again grow good pasture grasses. Now on reasonably good soils not subject to erosion, the case is different. There in order to realize most from lespedeza, you must graze it heavily during the time when it is making the most rapid growth. Close grazing will not prevent reseeding in most cases. This is especially true of Common lespedeza, a quality which causes many farmers to prefer it in permanent pastures to the later but heavier producing varieties like Kobe and Tennessee 76.

Now a few comments on lespedeza as a hay plant. It is not recommended for soils which will grow good crops of alfalfa and clover. But on soils too acid for these crops lespedeza will often give yields of 1 to 3 tons per acre. The quality of lespedeza hay is somewhat lower than that of alfalfa, but it compares favorably with most legume hay, and can be fed with little waste.

The best hay variety is Tennessee 76, but it can be used only from Tennessee and North Carolina south. Kobe ranks next as a hay variety. It is grown for hay as far north as central Virginia. Farther north and west Korean is the best for hay.

But if you want to make hay from lespedeza, keep two things in mind, either make the cutting early enough so the plant will have time to grow and produce seed afterward, or set the sickle bar high enough to leave some of the lower branches for reseeding the land. Now, to sum up the situation:

1. There are varieties of lespedeza adapted to climatic conditions from the latitude of southern Pennsylvania and Iowa southward to the Gulf, and from central Texas eastward to the Atlantic Coast.

2. Korean and early varieties of Common are best in the North, Kobe and Tennessee 76 in the Cotton Belt. Common lespedeza may be grown there also.

3. Lespedeza is most productive when grown in rotation with a small grain crop and the yields of grain are increased rather than diminished by its presence in the field.

4. It is easy to get a stand of lespedeza by broadcasting the seed on the surface in March or April on fall-sown grains.

5. Failure to obtain stands is usually due to the occurrence of one or more hard freezes after an early seeding.

6. Lespedeza will thrive on soils so acid that alfalfa and the clovers fail completely.

7. The cost of growing lespedeza is small because lime and fertilizers are not required on soils of moderate fertility.

Finally lespedeza is available for grazing in midsummer. Other plants must be depended upon for early spring and late fall grazing.

SALISBURY:

Thank you very much, Mr. Vinall. I am sure Farm and Home Hour listeners understand that the comments you have given us are summaries of reports from farmers and experiment stations on the use of lespedeza, and are not recommendations for handling lespedeza seedings on contracted areas. These recommendations may be obtained from county agricultural agents. Any of you who wish to have a permanent record of the reports on experiments with lespedeza in different sections may write the United States Department of Agriculture, Washington, D. C., and ask for a copy of Leaflet 100-L, "Lespedeza."

